



City of New Orleans Application to the US Department of Housing and Urban Development's
National Disaster Resilience Competition

(FR-5800-N-29)

Draft for Public Comment

February 25, 2015

EXHIBIT A: EXECUTIVE SUMMARY

With the support of the federal government, the City of New Orleans (CNO) has strongly recovered from one of the nation's costliest and most devastating disasters, Hurricane Katrina in 2005. Housing, roads, transit lines, public facilities, coastal restoration projects, and a new levee system have helped CNO restore its major commercial, financial, and social systems. In many ways, CNO has bounced back better than ever, recently named by *Forbes* magazine as “#1 Brain Magnet” in America, “#1 for Business Climate” by *Business Facilities*, and “#2 Boomtown in America” by Bloomberg. In doing so, the City of New Orleans has re-secured its position as the cultural and economic center of the Gulf Coast and built an international standing as a city on the rise.

Yet much recovery work remains. The economic benefits of recovery in CNO have been unevenly distributed across geographic, racial and income levels. Availability of affordable housing is decreasing, unemployment among African-American males is at historic highs, and vulnerable communities such as renters, elderly and low-income families struggling to make financial ends meet.

Hurricane Isaac demonstrated that the federal investments in levees paid off, protecting residents and property in the greater New Orleans from 14-foot storm surges. However, strong winds and sustained rainfall from Isaac exposed enduring vulnerabilities in CNO's water and energy systems: flooding throughout the city regularly causes repetitive loss and damages overwhelmed stormwater infrastructure; rain and wind cause loss of grid power and cause damage to structures; and storm surges damage vital coastal defenses.

New Orleans is now at a critical juncture, poised to build on the successful recovery efforts of the past ten years to become a national laboratory for resilient urbanism and an international showcase for deltaic community adaptation. As sea levels rise and climate patterns shift, managing the risks and manifesting the opportunities facing this nearly 300-year-old City will require persistence, innovative strategies, and coordinated effort around a common vision for our future.

Simply rebuilding CNO as it was prior to Hurricane Isaac has not and will not suffice as a true resilience-enhancing strategy. CNO and its partners are requesting support from HUD to leverage our existing knowledge and capacity to implement a whole-systems approach to resilience that includes integrated water management, coastal restoration, and distributed energy generation.

EXHIBIT B: THRESHOLD NARRATIVE

Demonstrating Unmet Recovery Needs Threshold Requirement

The City of New Orleans received \$15,031,000 of CDBG-DR funding from HUD following Hurricane Isaac. The storm was a slow-moving, high wind event that raged over the City for several days with severe damages to the City's hallmark tree population, as well as many houses still blighted from Hurricane Katrina. Approximately \$2.5M was devoted to debris removal and demolition of unsafe residential structures. Much of the fallen debris washed into the City's already-taxed drainage system, requiring about \$7M for the clearing and repair of catch basins and drainage lines. Other activities to which the City allocated its Isaac CDBG-DR funding included the cost share for FEMA repair projects and grant oversight for compliance control. To date the City has fully allocated all of its Isaac CDBG-DR funding, the full breakdown of which is included as Attachment X, and while the City has worked tirelessly to prioritize the distribution of available resources to the most immediate needs of its citizens, funding has not been sufficient to meet all of the City's needs following the disaster, nor is there funding on hand to reduce the City's risk from future storm events. This section demonstrates the types of infrastructure and environmental resiliency needs of the City going forward.

INFRASTRUCTURE:

The City of New Orleans faces a number of Isaac-related resiliency needs for its infrastructure systems and public facilities that remain unaddressed and unfunded, amounting to a substantial unmet need of approximately \$XXX. The vulnerability of New Orleans' infrastructure can be illustrated through three examples of needed resiliency upgrades to the city's undersized

drainage infrastructure, inadequate wastewater removal and treatment network, and unprotected historic structures.

The **City of New Orleans' drainage system** is outdated and undersized for the magnitude of stormwater runoff that enters the system and can become overwhelmed by large rainstorm events, let alone the extended heavy precipitation that hammered the drain lines, culverts, canals, and pump stations during Isaac. The City of New Orleans commissioned a Citywide Drainage Master Plan, completed in 2011, that modeled the necessary system upgrades to manage the stormwater from a 10-year storm event. When funding is available, the City takes advantage of its routine roadway maintenance/reconstruction schedule to upgrade its subsurface drainage infrastructure to meet this design standard.

Hurricane Isaac exposed the systems' inadequacies as felt by its citizens through extensive flooding of streets and properties from drainage system backups. A clear example is the 8200 block of Apricot Street in the Leonidas neighborhood, where, as stated in the FEMA Project Worksheet, "high volume, high velocity rainwater damaged a 31-lf section of 18-inch clay pipe... [and] caused two sinkholes; one 5'x5'x8' deep and one 8'x8'x8' deep" (Attachment X). FEMA reimbursed the City to repair the pipe to its pre-storm size at a cost of \$14,538.90; had the City had sufficient funding, however, it would have upgraded the entire block to the Citywide Drainage Master Plan's recommended two 33-inch reinforced concrete pipes at an estimated cost of \$XXX (Attachment X). This city block and its underserved residents represent a citywide unmet need to increase the capacity of its gray infrastructure to protect the safety and property of its residents. Going forward, 8200 Apricot exemplifies opportunities to implement innovative stormwater best management practices to manage stormwater in a more sustainable manner.

The Sewerage and Water Board of New Orleans' (SWBNO) Sewer Lift Pumping Stations (SPS) transport wastewater through SWBNO's networks of pipes to the wastewater treatment plant and ensure that citizens are not exposed to unsanitary conditions. Twenty of these critical facilities were damaged during Isaac, including SPS A at 1321 Orleans Avenue in the heart of the historically African-American Treme neighborhood, where wind-driven rain inundated the historic structure and burned out a controller motor (Attachment X). Furthermore, the SPSs are reliant on the local power provider and highly susceptible to outages, such as the multi-day shutdown that occurred during Isaac. SPS A was inoperable for approximately 48 hours before a portable backup generator could be installed at the site and operations resumed. Although the pump motor and roof were repaired after Isaac, an unmet need remains to [do something] to the structure to prevent future inundation during high wind precipitation events and provide permanent backup power generation capabilities at the site, at an estimated cost of \$XXX (Attachment X). These measures will ensure protected equipment and redundant power for the sewer pumping station for uninterrupted wastewater removal services.

ENVIRONMENTAL DEGRADATION: Unrepaired damages to coastal protection systems increase risk to housing, infrastructure, natural resources, and economic development assets in Orleans Parish, and represent an unmet recovery need. The Orleans Land Bridge Shoreline Protection and Restoration Project (Lake Borgne land bridge), funded by the U. S. Department of the Interior (DOI) – Minerals Management Service's Coastal Impact Assessment Program (CIAP) to the Coastal Protection and Restoration Authority (CPRA), is needed to protect the integrity of Lake Borgne's southern shoreline from the combined effects of high wave energy, sea level rise, and subsidence. By buffering the southern shoreline's wetlands, the land bridge will help to reduce stress on the adjacent Mississippi River Gulf Outlet (MRGO) navigation

channel, nearby levee protection system, Michoud Assembly Facility, and other economic and residential assets beyond. The land bridge was partially constructed (approximately 32%) when Hurricane Isaac's wind and storm surge inundated areas of eastern Orleans Parish outside of the levee system. The resulting impacts included direct physical damage to the constructed gabions, erosion of the shoreline beyond the completed section of the land bridge, and sedimentation. The damage caused by Isaac still exists and there are no funding resources identified to date to rectify the damage and allow the project to continue to completion.

The City is submitting FEMA's PW1519 (Attachment X), which documents the damages from Isaac, but which FEMA rejected as eligible, deferring responsibility of the partially completed structure to DOI. A report from CPRA states that the cost to restore the environmental damages and complete the land bridge is approximately \$X,XXX,XXX. Fulfilling this unmet need to complete the Lake Borgne land bridge is one step in connecting and strengthening New Orleans' lines of natural and manmade coastal defense that will sustain the City into the future.

Most Impacted and Distressed Area. Orleans Parish/City of New Orleans (CNO) has been identified by HUD as a "Most Impacted and Distressed" area, in Appendix G of the Notice of Funding Availability for the National Disaster Resilience Competition (FR-5800-N-29).

NATIONAL OBJECTIVE:

Each proposed activity will meet the urgent need national objective and/or provide benefits to low/moderate income persons.

OVERALL BENEFIT:

At least 50 percent of the CDBG-NDR grant award will be used for activities that benefit low- and moderate-income persons, unless waived.

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EXHIBIT C: CAPACITY

Over the past ten years, The City of New Orleans (CNO) has demonstrated significant capacity to innovatively and strategically invest federal funds to grow the local economy, build resilience, and ensure quality housing and economic prosperity for its residents, including the most vulnerable populations. CNO oversees an extensive portfolio of sizable and complex projects, coordinates multiple public and private partners, and engages a diverse and extensive network of stakeholder groups.

Through the Long Term Community Recovery Program, CNO currently manages over \$400 million in CDBG-DR funds, comprising dozens of sustainable infrastructure projects, park and streetscape enhancements, LED street light upgrades, affordable housing developments, fire stations and community centers, and incentives for economic revitalization. Not only has CNO used CDBG-DR funds to support vital recovery projects, it has creatively employed them to spur economic revitalization and neighborhood redevelopment in areas that have long suffered from blight, unemployment, and crime such that the act of recovering from disaster has addressed problems that existed long before the named disasters.

CNO will be the grantee, project leader, and will provide general project management for these grant funds. The current administration has instituted significant internal controls to manage projects, ensure quality, and comply with financial and procurement regulations. Key measures include:

- In 2010, to augment federal grants and project management capacity and enhance quality assurance, CNO hired Jacobs/CSRS, a joint venture between Jacobs Engineering and

CSRS, to project manage FEMA-funded projects. Jacobs/CSRS manages the daily work of architects, engineers, and contractors ensuring timely and cost-effective project delivery and compliance with local and federal laws and regulations.

- When the Landrieu administration took office in 2010, CNO refined the project portfolio and its management systems, adding capacity, improving financial controls, enhancing grant compliance oversight and monitoring, and enhancing quality assurance.

Furthermore, these systems are now codified in the governing structure and in the case of procurement, codified in law, so they will continue beyond the current administration.

Due to this, CNO's 2013 financial audit confirmed that CNO's HUD funds are under sound management.

CNO has extensive experience coordinating with partners on large, multi-disciplinary projects and across a wide range of sectors including affordable housing, infrastructure repairs, homelessness services, cultural and historic preservation, economic revitalization, open space development, public health initiatives and violence reduction programs.

Examples of CNO's experience working with and coordinating among partners—including contractors, funders, sub-recipients, community stakeholders, and other government agencies—include:

- HUD Choice Neighborhood Initiative (CNI) Implementation Grant: CNO and HANO are implementing this \$30.5 million award to transform the Iberville public housing development into a vibrant mixed-income, mixed-use, sustainable community and to revitalize the historic Tremé neighborhood.
- HUD and DOT Sustainable Communities Planning Grant: CNO worked with local

universities, national planning firms, key employers, anchor institutions, national and local philanthropies, and community members to develop the Livable Claiborne Communities plan, creating comprehensive strategies to connect disadvantaged job seekers and businesses to new economic opportunities.

- HUD and Veteran's Affairs: In response to First Lady Michelle Obama's Mayors Challenge to End Veterans Homelessness, CNO led an initiative carried out by a coalition of partners to successfully become the first major U.S. city to house every single homeless veteran—one year ahead of schedule.
- CNO and FEMA Infrastructure Improvement Plan. CNO, SWBNO and EPA will spend a billion dollars to upgrade sewer capacity across the city.
- CNO and U.S. DOT TIGER Grant Implementation. CNO is expanding its transit network using local and federal funds.

This application was written by staff of CNO and its implementation partners NORA and GNO Inc. This staff will be a part of the project delivery team should NDRC grant funding be awarded. The content of this application was developed with input from a wide variety of public, private, and nonprofit stakeholders, which were identified through a systematic and comprehensive stakeholder engagement effort.

The City of New Orleans includes multiple departments with capacity and expertise in data analysis, public works, affordable housing, environmental quality, community engagement, design and engineering, affordable housing, economic revitalization and each has a responsibility to enhance resilience. CNO has built capacity to manage large, complex projects

with multiple funding sources and regulatory requirements, and adheres to integrated infrastructure management.

The Department of Public Works (DPW) is responsible for maintaining approximately 1,547 miles of streets, 149 bridges, 68,092 catch basins and over 8,000,000 linear feet of drainage lines in the City of New Orleans. DPW has expertise in managing large capital improvement projects with multiple projects in various stages of development at any given time.

The Office of Community Development (OCD) stabilizes and revitalizes communities through the development of affordable housing and economic opportunity, and the delivery of community services that support poor and vulnerable populations. OCD manages CNO's CDBG funding, HOME funding, Housing Opportunities for Person with AIDS, and Emergency Solutions grant programs. OCD also successfully completed a \$52 million soft-second mortgage program using CDBG-DR funds.

The Public Health Department improves health outcomes through innovative approaches to bolster citizens' health and wellness. The Health department runs a broad suite of programs that focus on the full spectrum of wellness for individuals and families including nutrition education, reduction of childhood obesity, domestic violence prevention, health care access, mental health, and health in all policies. The Health department also maintains a registry of individuals in need of physical and/or medical support in times of evacuations.

The Office of Coastal & Environmental Affairs is responsible for protecting the city's water and natural resources, managing the municipal separate storm sewer system permit, and issuing permits for use of natural and protected lands. The Coastal & Environmental Affairs Office is CNO's liaison to the regional coalition working to restore the Mississippi Gulf Coast,

playing a key role in the statewide initiative to reduce coastal land loss and enhance the region's natural storm protection assets.

The Department of Information Technology and Innovation (ITI) supports all city departments and many public agencies with broadband telecommunications, computer networking, and enterprise software platforms. ITI also develops innovative solutions for both city and citizen use including GIS-based viewers for property records, blight reduction, and disaster recovery projects. The Innovation Delivery Team tackles citywide initiatives with data-driven analysis best practices and is currently focused on improving city services through asset management and enhanced infrastructure, homicide reduction and reducing joblessness among black men.

The Office of Performance and Accountability (OPA) manages the City's performance management meetings where responsible departments report on key performance indicators in public meetings and compiles the quarterly benchmarks report, ResultsNOLA, detailing the City's progress towards its stated goals and areas of improvement. OPA also runs NOLAytics, an initiative that uses statistical analysis and science to drive major improvements in service delivery, including resilience measures to track the projects funded by NDRC and programs that result from the 100 Resilient Cities and C40 processes.

CNO and its partners have the capacity to identify and assess science-based information on existing and future risks from climate change. Through the 100 Resilient Cities initiative, CNO receives technical assistance from Rand Corporation including international experts on climate change science, and experts on local environmental conditions who contributed to regional plans such as the modeling and risk assessment for the Coastal Master Plan. See Factor

2, for more detailed description of CNO's science-based risk assessment. In addition, SE Louisiana has an extensive network of technical and scientific expertise and other assets through universities, coastal industries, national and local NGOs which are focused on coastal management and climate adaptation. Numerous public/private collaborations have formed to build the tools needed to assess risks, a model being evaluated for similar initiatives at CNO.

The City of New Orleans and its partners have extensive experience with civil rights and fair housing issues and the capacity to conduct analysis on racial and economic disparities.

CNO's Office of Community Development creates and updates the Analysis of Impediments to Fair Housing Choice as part of its Consolidated Plan. Throughout this comprehensive planning processes, detailed analyses of racial and economic disparities has been a critical element of the plan and deliberated intensively through citizen participation. A new citywide Housing Plan under development in partnership with the CNO's Office of Community Development will also examine fair housing, choice, and opportunity. CNO also uses external information developed by local organizations such as The Data Center, which provides robust analyses on poverty and racial disparities in housing and employment outcomes, and the Greater New Orleans Fair Housing Action Center which provides monitoring and reporting on fair housing issues in the region.

The City of New Orleans and its partners are committed to design excellence in all public and private projects. If awarded NDR funds, CNO will create an inter-disciplinary design and technical review committee specifically for the proposed projects. CNO has already demonstrated its commitment to design excellence with its new comprehensive zoning ordinance

which includes progressive design guidelines that increase requirements and respect neighborhood and historic character while allowing for contemporary and innovative design. The City's adoption of a 'Complete Streets' ordinance, administered through City Planning, is another example of making good design a matter of policy. CNO's Director of Place-Based Planning works closely with project architects on publicly-funded projects such as community centers, fire and police stations, housing, streetscapes, and public facilities to ensure excellent design quality at the project and neighborhood scale. The Historic District and Landmarks Commission (HDLC) also works closely on the design of developments within their jurisdiction. This capacity resides within CNO government and is not dependent on a partner. Another precedent is the design review committee created by CNO partner NORA for its Façade Improvement program, comprised of the Director of Place-Based Planning, the Director of HDLC, the Director of Tulane University's City Center, and the Executive Director of NORA.

The City of New Orleans has established policies and guidelines for determining cost reasonableness. CNO's department of public works has cost reasonableness guidelines for publically funded projects including those that are funded with CDBG-DR funds. CNO, SWBNO, and NORA all have extensive experience with FEMA HMGP projects and have successfully proven the required benefit-costs analysis ratios.

The story of post-Katrina New Orleans has also been one of community engagement, harmonizing the contributions of diverse stakeholders, and empowering community leadership, both formal and informal. Nearly a decade of unprecedented and unparalleled citizen involvement in recovery planning, inspired the creation of the Mayor's Office of Neighborhood Engagement (ONE), which tracks every neighborhood and civic association,

identifies community leaders both formal and informal, and stays in constant contact and exchange with them regarding programs and projects as well as general quality of life issues. ONE uses informal gatherings as well as formal, quarterly summits to stay engaged with citizens and community leaders. ONE also attends neighborhood and civic association meetings with special attention to communities with fewer attachments to City Hall such as the Latino and Vietnamese communities. ONE created a Neighborhood Participation Plan for the City and also works closely with individual departments to develop their own plans. The Neighborhood Participation Plan is a road map for both government administrators and citizens and provides definitions, core principles, standards, and a framework to guide constructive engagement. CNO staff have been working with ONE to fully understand and leverage their engagement ‘infrastructure,’ and to enlist their support and resources, for deeper community engagement if invited to participate in Phase 2. At a host of community and neighborhood meetings, including the quarterly Neighborhood Leaders Roundtable in April 2015, ONE has invited CNO’s Chief Resilience Officer to lead a discussion about resilience in New Orleans.

To recover from shocks such as hurricanes and oil spills, as well as ongoing stresses such as coastal erosion and economic development challenges, CNO and its partners have extensive experience working with regional partners to address shared regional risks and challenges.

Greater New Orleans Inc. (GNO Inc.) is our regional economic development alliance serving the 10-parish region of Southeast Louisiana, including Orleans Parish. GNO Inc. has helped strengthen the region’s recovery by providing direct support to new, expanding, and relocating businesses; generating market studies and research; and coordinating initiatives with the Louisiana Economic Development Corporation. GNO Inc. also administered the creation of the Urban Water Plan, which addresses groundwater and storm water as critical factors in shaping a

safer, more livable, and economically vibrant Southeast Louisiana, in tandem with the existing levee system and Louisiana's 2012 Coastal Master Plan. The Urban Water Plan was made possible with \$2.5 million in CDBG-DR funds.

The City of New Orleans recognizes that its resilience challenges are inextricably linked to the other jurisdictions in the region as we share the same watershed, ecosystems and in some cases infrastructure. CNO will continue to collaborate with its counterparts throughout the region on critical resilience issues such as the Coastal Master Plan, disaster recovery and regional economic development initiatives. CNO will continue to work through its metropolitan planning organization, the Regional Planning Commission, on integrated development, transportation and planning issues. CNO is also working with adjacent parishes on strategies within the Urban Water Plan and other infrastructure and social initiatives that cross parish lines. Furthermore, CNO will continue to participate in existing networks that promote resilience at the city-to-city scale such as university consortiums and the C40 program..

EXHIBIT D: NEED AND EXTENT OF THE PROBLEM

On August 29, 2012, Hurricane Isaac shattered the 4.5” daily rainfall record set during Hurricane Katrina by dropping 7.86” at the New Orleans International Airport, and 10.13” within a 24 hour period at the Carrollton Water Plant. Under typical conditions, the city averages 5.98” a month. The peak storm surge of 11.06’ at Shell Beach on Lake Borgne, 20 miles southeast of the City of New Orleans, exceeded the 9.5’ surge recorded at that location during Hurricane Gustav in 2008, a Category 2 storm. Over the course of Isaac, wind gusted to at least 30 mph for 51 straight hours at the New Orleans International Airport, with a peak wind gust of 68 mph. The storm knocked out power to nearly 700,000 customers in southern Louisiana, many of which were without power for up to 5 days, and in some cases a week. Hurricane Isaac caused flooding, severe power outages, and direct damage to thousands of residential, commercial, and public structures, exposing vulnerabilities: flooding inside the levee system; a power distribution system that relies on vulnerable, above-ground facilities; and risks to private and public assets. Climate modeling show these vulnerabilities are risks which are expected to be exacerbated by climate change and sea level rise, joining other existing, ongoing stressors on CNO such as unemployment, poverty and violence. Together these threats impede economic and social inclusion and disproportionately affect CNO’s most vulnerable communities.

Narrative Summary: Unmet Need

Heavy rains and strong winds from Hurricane Isaac in 2012 caused widespread damage to the urbanized and coastal areas of CNO, in some cases exacerbating remaining damage from Hurricane Katrina (August 2005), in 4 major categories:

1) Water Infrastructure. Built in 1899 and expanded over time, the city's stormwater system pumps over 15 million gallons of water per minute during peak rain events, equal to the flow rate of the Ohio River. Battered by Hurricane Isaac, debris and damage to catchment basins and drainpipes weakened the ability of the system to function during the hurricane, and resulting in extensive flooding of public and private properties resulting in XXX flood insurance claims..

2) Damage to Public and Private Property. Dozens of residences, businesses, and public facilities sustained documented damages during Isaac from rain, wind and flooding. Due to lack of funding and previous claims made after Katrina, many of these structures remain damaged, or were bandaged with basic repairs to return them to service, but which leave them vulnerable to future storm events.

3) Degradation of Wetlands and Coastal Restoration Projects. Nearly half of the area within the City of New Orleans is coastal wetlands, which are compromised through experiencing degradation, rapid erosion, and saltwater intrusion due to storm activity in addition to manmade factors. Storm surges from Hurricane Isaac, between 4 and 14 feet, caused significant damages to coastal environments, including intact natural defenses, and specific coastal restoration projects that were underway at the time.

CNO's Comprehensive Risk Approach To Analyzing Need

CNO's comprehensive risk approach to analyzing need is twofold: first is to delve deeply into regional and national science-based evidence to understand the facts of our vulnerabilities and risks. Second is to conduct stakeholder consultation with city leaders, technical experts, and representatives of vulnerable communities in New Orleans to understand their perceptions of our risks and opportunities to address them. Third is to look at our own previous experiences and the direct impacts of those risks.

Approach #1: Climate Change Science. The science is clear: CNO faces extraordinary risk from climate change, sea level rise, and coastal land loss. According to an August 2011 report by the Natural Resources Defense Council, sea levels in New Orleans are likely to increase by 1 to 4.6 feet by 2100, giving much of the Louisiana coast a relative sea level rise rate that is among the highest in the nation. The Environmental Protection Agency confirms those estimates, predicting that low-lying coastal communities on subsiding land—such as CNO and Galveston, TX—would experience a relative 3.5-ft increase in sea level from only a 2-foot increase in sea level by 2100. Additionally, the United States Global Change Research Program (USGCR) estimates that sea level rise will likely exacerbate erosion to Louisiana's coastal wetlands, resulting in more frequent flooding and potential permanent losses of ecosystems and human communities.

Approach #2: Stakeholder Consultation. Over the past 5 months, CNO has conducted a comprehensive and systematic stakeholder outreach effort that has resulted in a fresh perspective from city leaders, technical experts, and representatives of vulnerable communities. CNO team used the Rockefeller's 100 Resilient Cities (100RC) City Resilience Framework (CRF) to identify stakeholders to ensure identification a broad base of stakeholders across all areas of

resilience. We also used the 100RC Perceptions Assessment tool to understand stakeholders' perceptions of what helps CNO bounce back from shocks and address ongoing stresses (see Attachment X for results of those exercises). We are also working closely with CNO's Department of Neighborhood Engagement, to prepare to use that 'infrastructure' for additional engagement in Phase 2.

CNO's Threats, Hazards, and Vulnerabilities

New Orleans is at risk of a variety of vulnerabilities from one-time shocks—including flooding, high winds, and power outages—to ongoing stresses such as coastal land loss, unemployment, violence, accessibility and public health. These shocks and stresses have a disproportionately negative impact on vulnerable communities such as low-income residents, the elderly, and the chronically ill.

CNO identified these risks following the aforementioned 100RC approach to comprehensive risk assessment and stakeholder engagement, including: Perceptions Assessments with City leaders and with advocates of vulnerable communities, reviewing Arup's Perspectives on City Resilience, New Orleans, USA (March 2014), participating at a Rockefeller Resilience Academy in Atlanta GA (December 2014), and participating in the HUD NDRC Summit in Washington DC (November 2014).

CNO has also used the best data possible in our assessment of our threat, hazards and vulnerabilities, including data from EPA's climate change resources, , the White House Climate Data Initiative , United States Global Change Research Program, CPRA coastal loss & storm surge modeling, NOAA/Louisiana State University Hurricane Center (modeling/predicting storms and their increasing frequency/strength), CDM Smith's Drainage Models (for 2-, 5- and 10-year events), GNO, Inc. and Entergy (specifically around business interruptions documented

in the Post-Isaac Report) and conversations with Jordan Fischbach from RAND Corporation. These resources collectively catalogue the resilient-related impacts to the environment, culture and economy of CNO.

The impact of climate change on these risks is substantial. Sea level rise will exacerbate coastal land loss, destroying ecological and human habitats in CNO and weakening its protection against storms, which will only increase in severity and frequency as oceans warm and ‘nourish’ stronger Atlantic storms. As a result, increased frequency/severity of storms will continue to batter CNO’s aging electrical and water infrastructure systems and damage public and private property. CNO’s “known unknowns” could exacerbate or alter these future risks, including precise future weather patterns, coastal resettlement patterns, and policy denouements around key issues such as National Flood Insurance Program.

Insurance remains a looming risk in CNO. There are uninsured and underinsured buildings across the city, creating obstacles to rebuilding in the wake of disasters, and expectations of increased insurance costs which could force out lower income residents, destroying our socio-economic diversity. CNO also has many residents who are living in homes passed down over the generations which lack mortgages, and are therefore not required by a bank to have property insurance. Beyond private property, uninsured public buildings create a vulnerability as well, including those subject to the ‘one bite’ rule. CNO documented damage to publicly-owned buildings after Isaac, such as museums, courts, warehouses, and park shelters. However, because these buildings were also damaged in 2005 after Katrina, they are not eligible for public assistance.

The range of risks that CNO faces will have disproportionate effects on vulnerable population groups; lower-income and African-American residents are more likely to live in low-

lying areas and experience routine flooding. Our aging, inadequate stormwater management system leads to backups during even routine rain events, causing flooding throughout the city. The estimated cost to fully build out a grey infrastructure, or pipe, system to handle the water volumes and address this flooding are projected at over \$4 billion.

Power outages as well—as seen most acutely during and after Hurricane Isaac—disproportionately affected vulnerable populations such as the elderly and chronically ill who rely on power supplies for oxygen concentrators, dialysis machines, and other medical devices. According to the State Health Department, power outages from Isaac resulted in at least 37 nursing homes and 23 hospitals in Southeast Louisiana to operate on generator power, cumulatively impacting approximately 5,779 residents. At some sites, backup generators failed, weren't designed to power air conditioners, or began running out of fuel. Underlying these outages is the lack of redundancy in the power grid. Though thousands of homes and businesses have added rooftop solar since 2005, scarcity of onsite energy storage capacity and local legislation that inhibits onsite generation of any substantial scale render these systems ineffective as backup systems.

Existing stresses also exacerbate vulnerability. Generational cycles of poverty and violence within the African-American community, particularly among young males, have created a sense of hopelessness that is a barrier to social cohesion and a wider participation in the increasing economic opportunities that CNO is currently enjoying. Louisiana has highest incarceration rate in the world. Among black men from New Orleans, 1 in 7 is either in prison, on parole or on probation. Over half of working age African-American men in CNO are not working. Additionally, nearly a quarter of CNO's residents do not have access to a private

vehicle, which makes accessing and retaining a job, or evacuating from the city, even more difficult.

Since 2005, and particularly since 2010, CNO has taken extraordinary measures to address the risks from its vulnerabilities around shocks and stresses. These can efforts fall into one of four categories: planning, infrastructure, social cohesion, and metrics:

Planning efforts include the Unified New Orleans Plan (UNOP), to guide sustainable and equitable recovery and ongoing development in CNO. Recently, CNO adopted a new Comprehensive Zoning Ordinance (CZO) that, for the first time in CNO's history, will require on-site stormwater management for all projects over 5,000sf. Complementing the UNOP and CZO, in 2013 the Urban Water Plan (UWP) was completed, laying out an ambitious plan to enhance existing regional water infrastructure through green infrastructure and other LID practices, identifying current and future risks, and the scoping projects to address them. Also that year, the HUD/FTA funded Livable Claiborne Communities Plan was completed, a community-based plan to guide holistic, inclusive development in CNO's historic core neighborhoods. Barriers to fully addressing development pressures and cultural preservation remain, including lack of funding to implement projects with broad support.

Infrastructure projects since 2005 have drastically enhanced resilience in CNO. The \$14 billion, continuous levee wall, hurricane protection system was completed in 2012 and is fully operational. The Army Corps of Engineers is constructing a multi-million dollar drainage upgrade project in the Uptown neighborhood of New Orleans to address street flooding. Over 80 miles of bike lanes have been built since 2005, along with hundreds of new public bike racks and over 200 new transit shelters across the city. New fixed rail routes such as the Loyola Streetcar

connecting our bus/train passenger terminal to greater downtown New Orleans is operational, and the extension along the French Quarter is under construction. Innovative pilot projects throughout the city, such as a series of raingardens on vacant NORA-owned lots, detained and infiltrate stormwater in areas prone to localized flooding, illustrating how privately-owned land can serve to augment existing stormwater infrastructure. That effort is currently being taken to scale on nearly 60 vacant properties across CNO, some of which are being designed using a detailed BCA to ensure that the costs to build the raingardens are less than the cost savings of reduced FEMA flood claims. Barriers to fully addressing this issue remain, including lack of funding to develop new raingardens and more sophisticated green infrastructure projects.

Social cohesion initiatives are tackling every major stress in New Orleans. Education reforms have improved education system for low-income students and families, and NOLA For Life, the Mayor's comprehensive violence reduction strategy, has reduced homicides in CNO's most violent neighborhoods. The Livable Claiborne Communities plan led to the creation of the Network for Economic Opportunity, a CNO initiative to connecting local, non-working African American men to career-path jobs in large publicly funded projects like the University Hospital and the new CNO Airport. Barriers to fully addressing job access remain, including increasing the participation of young black men in the job training programs.

Lastly, CNO's most widespread improvement is using data to better understand performance **metrics** around key indicators. CNO's Office of Performance and Accountability (OPA) promotes better City services through data-driven management, decision-making and accountability. Analysis of performance around key indicators such as blight, crime, and emergency response times are reviewed monthly to understand what's working, what's not, and

to identify solutions for improvement, which may include making changes to strategies, programs, or the allocation of funds.

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EXHIBIT E: SOUNDNESS OF APPROACH

Based on our comprehensive and systematic risk assessment (see Factor 2), which included extensive stakeholder input, City of New Orleans (CNO) has developed an ambitious and achievable approach to enhancing resilience, focusing on resilient upgrades to our water and power systems.

Our Stakeholders

The stakeholders for this project are city leaders, technical experts, and representatives of vulnerable communities. Using the Rockefeller Foundation's City Resilience Framework as an organizing framework, we identified stakeholders through a systematic and comprehensive scan of individuals and groups within and outside of city government with the influence or capacity to build resilience in New Orleans. This involved a half-day workshop with the NDRC application team identifying individuals and organizations that have the capacity to enhance resilience, for each of the 50 sub-drivers in the City Resilience Framework, to ensure that our stakeholders represent the broadest possible perspectives on resilience (see Stakeholder Engagement List). CNO team also worked closely with the Resilient New Orleans (100 Resilient Cities) team to ensure that our stakeholder outreach efforts were complimentary and coordinated.

What We Have Already Discussed

We have had extensive discussions with stakeholders in a variety of formats, including one-on-one interviews, issue-based discussions with technical experts, and facilitated discussions with key leaders from public and community sector. Below is list of key stakeholders we consulted

with in the development of this application (the full list of stakeholders consulted are in the attached Consultation Summary).

- 1) CNO Office of Neighborhood Engagement (ONE). CNO staff met with ONE on several occasions to understand their outreach ‘infrastructure’ in neighborhoods. ONE maintains and develops ongoing relationships with formal and informal leaders in each of the 74 neighborhoods in New Orleans (per the City Planning Commission), through quartetly Neighborhood Leadership Roundtables around pressing issues such as housing, crime, and economic development.
- 2) Greater New Orleans, Inc (GNO Inc). The regional economic development alliance serving the 10-parish region of Southeast Louisiana, including New Orleans, administered the development of the Urban Water Plan with a team of local and international water experts. The Plan directly addresses groundwater and storm water resiliency and works in tandem with the existing levee system and Louisiana’s 2012 Coastal Master Plan. Through regular meetings with CNO staff, a strong correlation between economic development and resilience has been uplifted.
- 3) Greater New Orleans Foundation (GNOF). GNOF is one of the largest philanthropic organizations in New Orleans, designing and leading broad-based initiatives to meet community needs. They have been a valuable conduit between the CNO team developing this application and representatives of vulnerable communities in New Orleans, such as advocates for affordable housing, coastal restoration, children and youth, public health and job creation.

- 4) New Orleans Urban Water Collaborative (UWC). UWC is a collaborative of individuals, organizations, and communities working to address critical water issues throughout New Orleans and the greater region, guided the vision and principles of the Greater New Orleans Urban Water Plan to develop a vision for a safer and more beautiful city built upon sustainable water management. Leaders of the UWC have provided invaluable insights into how CNO can enhance the resilience of its water management systems.

Stakeholder engagement has been strengthened by 100RC Perceptions Assessments, which consist of a facilitated discussion surrounding factors of resilience based on three key questions: *What helps the city bounce back from shocks and stresses? What keeps the city going every day? What could the city be doing better?* We have held two Perceptions Exercises as a part of our NDRC stakeholder outreach:

- 1) CNO Department Heads, January 2015: Convened by the Mayor and led by NDRC/100RC team members, this 2-hour exercise solicited thoughts and opinions on resilience from 17 CNO department heads and policy advisors. Key perceived risks that emerged, including inefficient management of stormwater, lack of economic opportunity (especially among African-American males), coordination within CNO and with regional partners, quality of public/workforce education, outdated IT infrastructure, and lack of trust between residents and government.
- 2) Representatives of Vulnerable Communities, March 2015 (expected). Convened by the Greater New Orleans foundation and led by NDRC/100RC team members, this 2-hour exercise solicited thoughts and opinions on resilience from representatives of vulnerable

populations such as low-income residents, workforce development organizations, advocate for homeless services, and criminal justice reform advocates.

How We Will Work With Stakeholders in Phase 2

The primary outreach conducted by the CNO team in this Phase of the NDRC process has been to identify the broadest range of stakeholders, meet with stakeholders that represent key sectors, and to develop a plan for more grassroots outreach in Phase 2. It is important to build and strengthen external relationships with community leaders and conveners who can help reach a larger group of citizens and serve as liaisons between the community members and the NDRC development team. We plan on working with stakeholders in Phase 2 in at least four ways:

- 1) Partnering with CNO's Office of Neighborhood Engagement (ONE) to leverage existing relationships with neighborhood-based formal/informal leaders across the city, and to lead a Quarterly Leadership Roundtable on Resilience in April 2015. This 'engagement infrastructure' builds off of the planning and public participation processes done over the last 10 years in New Orleans.
- 2) Utilizing the 100RC Stakeholder Engagement Plan developed in February 2015, through which we will partner with Tulane City Center and the Greater New Orleans Foundation to fulfill the goal of having a comprehensive and meaningful stakeholder engagement process. Similar to the engagement process with ONE, 100RC's stakeholder engagement structure builds off of the planning and public participation processes done over the last 10 years in New Orleans.

- 3) Focus meetings with residents and businesses in geographically-focused areas located in/near proposed projects. This will ensure participation and support from those living and working around proposed projects in our Phase 2 application.
- 4) Focus meetings with residents, businesses and advocates working in program/policy areas that are relevant to proposed projects. This will ensure participation and support from those working on key policy and program issues that are proposed in our Phase 2 application.

Ideas and Concepts to Further Enhance Resilience in New Orleans

CNO's efforts to further enhance resilience are rooted in 6 key concepts:

1. Build a city- and region-wide network of resilient stormwater management. CNO cannot handle either the current or future volumes of water that deluge our 100-year old system. The cost to build a 'gray' system that can handle the expected volumes of water over the next 50 years would cost \$4 billion, without creating any co-benefits. The recently-completed Urban Water Plan lays out a realistic vision to rebuild our water systems more effectively, with greater benefits, and at less of a cost. The projects range from streetscapes, to canal reconfiguration, to on-site strategies for homeowners. Many of these projects have already been presented to neighborhoods and have earned their support. It is an ideal vision to utilize in service of building a more resilient New Orleans.
2. Create redundancies in our power grid to ensure access to power during and after shocks. Hurricane Isaac, the smallest possible storm that can be defined as a hurricane, knocked out power citywide for nearly a week, and caused significant economic damages.

Vulnerable communities like seniors and the chronically ill suffered, as did low-wage workers that lost precious income. CNO’s electricity system—which relies on above-ground distribution and has no backup generation or redundancy, was rebuilt after Isaac “as is”, and remains completely vulnerable to future outages. Even the thousands of homes and businesses with rooftop solar were not able to generate their own power, due to lack of storage and arcane rules from Entergy, the privately-owned electric and gas utility. Incredible advances have been made elsewhere around micro-grids, to ensure equitable and sustained distribution of energy during and after storms. These micro-grids could also be incorporated into ‘Recovery Villages’—centers of community support during major storm events, where the residents of all 72 of our distinct neighborhoods would have equal access to recovery assets in times of need

3. Invest in coastal restoration projects. Half of CNO is wetlands, which provide valuable human and ecological habitat, as well as critical absorption of surge during storms. Isaac battered the Southeast Louisiana coast, including CNO, and destroyed several restoration projects underway. Without a restored coast, CNO’s future is at grave risk. These restoration projects provide true ‘multiple lines of defense’ against hurricanes and storm surges—from barrier islands in the gulf to our urbanized waterways. The CPRA is doing incredible work, but projects in CNO are limited and in need of funding.
4. Tie infrastructure investments to *direct* job creation for unemployed, particularly African American males. With a significant percentage of African American males of working age currently unemployed, and known barriers, such as criminal records, preventing employment in the lucrative energy field, steady work offered through “green jobs” is a significant pathway for social mobility and economic advancement. A wave of retirement

within the Sewage and Water Board, coupled with the aforementioned needed infrastructure investments, has the potential to create a unique double-win for CNO on two fronts. Currently, CNO and partners like GNO, Inc. are exploring opportunities in this field, but barriers such as education, transportation and awareness must be addressed to truly leverage and seize upon this rare moment.

5. Build out our IT/asset management systems that allow accurate inventory and to repair/respond quickly during and after shocks.
6. Create a resiliency index, based on CNO's existing STAT portfolio, to establish baselines, measure success and provide a replicable tool for other cities around the world.

These actions are a strong step towards creating resilience in New Orleans. But a much greater need remains. Since 2005, New Orleans has come together, as one voice and one people, to rebuild our beloved city—not as she was, but as we always knew she could be. Hurricane Isaac exposed remaining risks and vulnerabilities that cannot be addressed exclusively through conventional projects such as stormwater pumps and increasing home elevations. Our overall approach to resilience at this historic moment is to leverage the existing public and private investments that were started after Katrina as a foundation upon which to build a more resilient city and region.

From our coast to our curbs, we will use our location as a delta city to develop be a true national 'laboratory' to implement a full spectrum of resilience-enhancing projects—water systems, electricity systems, coastal restoration, equitable economic development, and smart technology systems—that will help us bounce back from shocks and reduce the stresses that

degrade our ecological and human habitats. In every resilience-enhancing action we take, the beneficiaries are people.

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EXHIBIT F: LEVERAGE AND OUTCOMES

City of New Orleans (CNO) will leverage past experience, strong partnerships, other funding sources to ensure outcomes that result in the implementation of a portfolio of resilience-enhancing projects and programs that will allow CNO to move beyond mere “recovery” to become a national leader in resilient urban development in coastal areas. Outcomes will include more resilient water and power systems, and provide new economic opportunities that will have positive impacts on poverty and unemployment.

Outcomes: Using the Strength of CNO’s Recovery as a Basis for Innovation

CNO’s approach to risk reduction in New Orleans will focus on four categories of solutions, which will use the strength of our recovery since Hurricane Katrina as a foundation upon which to innovate around resilience-enhancing projects and programs, in four key areas:

- **Physical Infrastructure Projects** such as nature-based storm water drainage enhancements, energy grid redundancy, and coastal restoration.
- **System Infrastructure Projects** such as GIS technology improvements, communications systems, and governance changes.
- **Demand-Driven Programs** such as home elevations, home or business energy retrofits, and job creation initiatives.
- **Human Capital Investments** such as access to public transportation, investments in new industries that spur new jobs, focus on opportunities for low-income jobs, crime reduction strategies, improving livability of all neighborhoods,

Some of these solutions speak directly to disaster recovery while others speak to community development objectives that affect residents' daily life but also impact our ability to be resilient after major shocks. These solutions need to be addressed comprehensively to ensure long term performance. For example, the benefits of an enhanced drainage system must go beyond the single purpose of moving water away from homes and businesses, to multi-purpose projects that provide co-benefits such as innovation in green infrastructure technology, job creation, ecological restoration, reduction in carbon emissions from our pumping stations, and the creation of recreational open spaces (see Factor 5 for descriptions of current CNO green infrastructure projects with co-benefits). The value of a single purpose approach degrades quickly over time whereas improvements with multiple benefits such as, recreation and economic development, become part of the city's culture that serve many stakeholders and become invaluable for generations.

Each approach will have its own implementation schedule, ownership structure, and maintenance regime. For example, certain green infrastructure solutions may include buy-outs for nature-based storm water management. In this example, the buy-out costs have already been expended thanks to support from the State of LA and HUD after earlier disasters. The past buy-outs will leverage new resilient projects leaving minimal remaining cost requirements to convert properties to neighborhood rain gardens/parks. Rain gardens require minimal maintenance but rely on nature to operate and reduce the load on our mechanical systems. Other solutions will be integrated with our resilient physical infrastructure projects to help encourage job opportunities in new industries.

The co-benefits from these approaches are similar. By seeking to build innovative systems and networks that help the City adapt to our future, we will realize benefits such as improved level of

safety and responsiveness, reduction in rates of subsidence; increased economic development in underinvested areas; public health improvement by providing more accessible, safe public space; reduction of unemployment by creating new innovative industries around water management and energy efficiency.

Environmental and Financial Sustainability of CNO's Projects and Programs

CNO projects and programs will be implemented with a focus on environmental and financial sustainability. For example, one of the City's biggest vulnerabilities, flooding during even routine rain events, is due to our unsustainable approach to managing storm water, which has been focused historically on pumping every drop of water out via an expensive, resource intensive network that cannot accommodate current water volume levels, let alone the increases expected due to ocean warming, sea level rise, and climate change. This system of pumping out water also exacerbates other vulnerabilities, such as land subsidence. CNO has begun innovations around stormwater management that are engineered to reduce flooding while turning our relationship with water into an asset rather than a liability.

CNO recognizes that innovations in stormwater management create opportunity to address some of our ongoing stresses such as unemployment, poverty and violence. To this end, all our projects, funded by NDR or not, will contribute to more opportunities for unemployed persons and Section 3 residents, revitalize our targeted areas of disinvestment, mitigate blight.

CNO will measure the success of our projects and programs. Based on the City's vulnerabilities exposed during Hurricane Isaac the following will be indicators of success if awarded NDR funds: reduced localized flooding; job creation; habitat restoration; increased

access to public space that is safe and enjoyable; less storm water being pumped out and more retained for filtration

CNO will Leverage Additional Resources and Partners. CNO has extensive experience working with local and regional partners to leverage financial, organizational, and intellectual resources. CNO has been building relationships since 2005 around resilience, many of which respond to vulnerabilities that are much broader than those just affecting the City of New Orleans.

Co-Benefits of CNO's Projects and Programs. Identifying and quantifying co-benefits allows the City to attract a diversity of stakeholders' interest and potential investment. By pro-actively engaging stakeholders around the various co-benefits that we expect from our projects, we will find more committed financial partners to ensure the start-up and/or on-going success of the endeavors we pursue in Phase 2.

CNO's confidence in our ability to find new investors is demonstrated from its past experience. The Laffite Greenway, a green corridor that will connect the city center with northwest neighborhoods via a 2.6 mile bike and pedestrian path, will provide connectivity to the public but co-benefits abound such as recreation, summer cooling, storm water management and public health. The \$9.1 million project was only possible leveraging partners and resources like The Trust for Public Land (TPL) who helped the City by funding the necessary acquisition. The TPL's investment helped the City complete the project while they addressed their mission of conserving public space.

CNO's Comprehensive Commitments to Resilience. Given two far-reaching major events, Hurricane Katrina/Rita in 2005 followed by the BP Oil Spill in 2012, the City has experience

working with partners that have objectives reaching beyond CNO's geographic boundaries. The City will continue to collaborate with local and regional partners who are committed to regional problem solving with resilience projects carried out across geographic and political jurisdictions.

Thanks to the NDR competition, conversations with partners like GNO Inc. have taken on new life. GNO Inc. represents the economic development interests of 10 Parishes in Southeast Louisiana; this includes the two other NDRC eligible Parish entities in Louisiana, St. Tammany and Jefferson. GNO Inc. is committed to help the City and the entire region extend our resilience approach and projects further by being an advocate for each individual jurisdiction in broader conversations that impact larger resilient projects that cross geographic and political boundaries. Through GNO Inc.'s mission, the City will leverage resilient projects that are implemented elsewhere and vice versa.

In addition to GNO Inc., the State of Louisiana, Office of Community Development (State-OCD) has been a steadfast partner with CNO and our resilient planning efforts. In 2010 the State-OCD funded the Urban Water Plan (UWP). Described in earlier sections in detail, the UWP is an internationally recognized comprehensive plan that suggests concrete, feasible water management projects that are ready to be executed across 3 neighboring Parishes, including Orleans. In addition, in 2013 the State of Louisiana awarded a Resiliency Planning Grant to the City's redevelopment authority that provided over \$450,000 in part to fund a Resiliency Planning Fellow. The Fellow is still a staff member tasked with developing innovative ideas for reuse of vacant land related to storm water management, ecosystem restoration, beautification, and neighborhood stabilization. The Fellow has also helped the City plan and evaluate NDR project proposals.

EXHIBIT E: REGIONAL COORDINATION & LONG TERM COMMITMENT

CNO has already taken, and plans to further take, several significant steps that commit CNO to increasing resilience, regardless of whether it receive a CDBG-NDR award. These include policy changes, projects, programs, governing reforms, and regional coordination commitments.

CNO has been making substantial investments in projects that demonstrate innovative green infrastructure projects with co-benefits such as recreation and neighborhood stabilization. CNO partner NORA completed 5 raingardens across the city, which can each detain up to 88,000 gallons during rain events, and feature native landscaping and benches for public gathering. NORA is also in the design phase of a \$15 million FEMA-funded project to transform 50 vacant NORA-owned lots into a network of raingardens that will dramatically reduce flooding and FEMA claims. Construction is nearly complete on the Lafitte Greenway, a 2.6 mile bike and pedestrian path with stormwater retention benefits. And the New Orleans Sewerage and Water Board has begun improvements to the stormwater drainage and pumping system to enhance efficiency, reduce street flooding, and ensure continuous supply of potable water.

Policy commitments include a new Comprehensive Zoning Ordinance that requires, for the first time in New Orleans history, on-site stormwater management for all projects on parcels 5,000sf or greater. CNO has added some important, high-level staff in recent months. CNO appointed its first Chief Resilience Officer, along with a program assistant, in December 2014.

In January 2015, CNO hired its first-ever Stormwater Manager to oversee public investments and policy around innovative stormwater management.

Louisiana's Coastal Protection and Restoration Authority has committed to construct projects in the City of New Orleans to help strengthen our coastline, preserve the ecological habitat, and provide essential protection against storm surges.

To address ongoing shocks, CNO has committed to 35% participation of disadvantaged business enterprises (DBEs) as a part of its \$650 million airport renovations.

CNO is committed to violence reduction, and will continue its NOLA for Life Program to make positive, lasting impact in the lives of at-risk young men and women living in New Orleans' most violent neighborhoods.

CNO is committed to improving public health outcomes in its investment projects, and will commit to completing an additional Health Impact Assessment (HIA) to complement the recently-drafted HIA related to a new healthy food grocery in Central City, a former food desert just outside of downtown New Orleans, where low-income residents suffer disproportionately from heart disease and diabetes.

CNO is committed to affordable housing to ease the stress of unaffordability, and its partner NORA will commit to funding at least 100 new units of affordable housing to be completed within 3 years.

ATTACHMENT D: CONSULTATION SUMMARY

NDRC-100RC Stakeholder Engagement Catalog Updated February 25 2015				
Agency Name / Stakeholder Group	Agency Type (Target Population, if applicable)	Date	Type of Outreach	Method of Notification (and Materials If Applicable)
Aron Chang and David Waggoner, Waggoner & Ball (and Urban Water Collaborative)	Private architectural firm responsible for Citywide water plan proposal	recurring	In-person meetings and phone calls	Discussion of water management strategies with one of the authors of the Urban Water Plan
Louisiana Regional Coordination Team (State, Jefferson Parish, Orleans Parish, St Tammany Parish)		recurring 12/2014-1/2015	Email and phone calls	weekly meeting/call between eligible applicants in Louisiana to discuss regional collaboration; 11
Van Alen Institute	Architectural Non-Profit Organization	12/16/2014	Structured interview	Email and phone calls
Rockefeller Resilience Academy	Foundation	12/17/14 - 12/19/14	Workshop	Resilience Academy
Amanda Moore, Mississippi River Delta Restoration Program		1/6/2015		briefing by NWRC regarding RESTORE Act and status of
Ron Harper, CNO Office of Coastal & Environmental Affairs	Public agency	1/6/2015		
Enterprise Community Partners		1/6/2015		NDRC training/strategy discussion with Enterprise
Core CNO NDRC Team Meeting	Public agency/eligible applicant	Recurring, weekly	In person meetings and phone calls	email
CNO Department Heads	Local Government Department Heads	1/13/2015	Group workshop to understand vulnerabilities, risks and opportunities (Perception Assessment)	Chief Resilience Officer and 100RC Staff announced via email and was coordinated via Mayor's office; 17 City of New Orleans department heads and senior leadership in attendance.
Department of Neighborhood Engagement	City Department		Structured interview	Email
Greater New Orleans Foundation - Urban Water Series	Non-profit - local gov't, media and neighborhood leaders	11/7/2014	Group meeting re: implementation of green infrastructure and stormwater mgt in New Orleans based on 3 previous field trips.	coordinated by GNOF
Greater New Orleans Foundation - Urban Water Series	Non-profit - local gov't, media and neighborhood leaders	12/10/2014	Group meeting re: broadening public education about green infrastructure and storm water management	coordinated by GNOF
Greater New Orleans Foundation - Urban Water Series	Non-profit - local gov't - Sewage and Water Board	2/2/2015	Group meeting led by GNOF with SWBNO re: incorporating stormwater mgt practices at SWB	coordinated by GNOF
Deutsche Bank	PACE Bond Underwriter		Structured interview	
Good 360	Disaster Relief Donation Platform			
Information Technology & Innovation	CNO Department			innovation resilience strategy
Patrick Otellini (SF CRO)	CRO		Structured interview	Email and phone calls
Tulane City Center	University-based community design center		Structured interview	Email and phone calls
Trust for Public Land	Non-profit environmental & public health organization		Structured interview	Email and phone calls
Committee of City Health Dept and local non-profits	Public health organizations and non-profits	2/3/2015	Roundtable meeting	Email
GNO, Inc. Board Meeting	Business Leaders	12/11/2014	Roundtable meeting	Email and agenda
Southeast Super Region Committee	Non-profit and business leaders	1/13/2015	Roundtable meeting	Email and agenda
Parish Presidents Meeting (10 parishes)	Elected Officials	2/10/2015	Roundtable meeting	Email and agenda
Economic Developer (EDO) Partner Meeting	Non-profits	2/19/2015	Roundtable meeting	Email and agenda
GNO, Inc. NextGen Council	Young Professionals (business leaders/non-profit)	2/19/2015	Roundtable meeting	Email and agenda
SwissRe	Re-insurance group	2/13/2015	Conference Call	Email